

REMARKS

Claims 1-16 are pending in the present application. Claims 1, 2, 4, 7, 9, 10, 14 and 15 have been rejected under 35 U.S.C. § 103(a) over U.S. Pat. No. 5,542,097 (“Ward”) in view of U.S. Pat. No. 6,278,879 (“Western”). Claim 3 has been rejected under 35 U.S.C. § 103(a) over Ward in view of Western and further in view of U.S. Pat. App. No. 2002/0058493 (“Ikeda”). Claim 6 has been rejected under 35 U.S.C. § 103(a) over Ward in view of Western and further in view of U.S. Pat. App. No. 2002/0064131 (“Boesinger”). Claim 8 has been rejected under 35 U.S.C. § 103(a) over Ward in view of Western and further in view of JP Pat. App. No. 63-200626 (“Iwasaki”). Claims 5, 12, and 13 have been rejected under 35 U.S.C. § 103(a) over Ward in view of Western and Ikeda and further in view of Boesinger. Claims 11 and 16 have been rejected under 35 U.S.C. § 103(a) over Ward in view of Western and further in view of U.S. Pat. No. 6,411,818 (“O’Reilly”). No claims have been amended hereby. Reconsideration of the present application is respectfully requested in light of the below remarks.

In paragraph 3 of the Office Action, independent claims 1, 9, and 14 and dependent claims 2, 4, 7, 9, 10, and 15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Ward in view of Western. Applicant respectfully traverses this rejection.

Claim 1 recites “calculating bidirectional propagation losses between said communication terminal and said main apparatus;” “checking whether a difference between the bidirectional propagation losses falls within a predetermined allowable range;” “determining that a transmitter or a receiver of at least one of said communication terminal and said main apparatus has a failure, if ... the difference falls outside the predetermined allowable range;” and “identifying said transmitter or receiver that has a failure based on whether the difference falls outside the allowable range, and whether a propagation loss of the propagation path to said main apparatus is smaller than a propagation loss of a propagation path to said communication terminal.”

Claim 9 recites “calculate an upstream propagation loss from the communication terminal to the base station and a downstream propagation loss from the base station to the communication terminal;” and “indicate a failure in the transmitter or the receiver if a difference between the upstream and downstream propagation losses exceeds a threshold value.”

Claim 14 recites “calculating an upstream propagation loss from the communication terminal to the base station and a downstream propagation loss from the base station to the communication terminal;” and “detecting a failure in the transmitter or the receiver if a difference between the upstream and downstream propagation losses exceeds a threshold value.”

Even if combined, Ward and Western fail to teach or suggest the above-recited independent claim limitations. Neither Ward nor Western discloses calculating a bidirectional propagation loss and identifying a failed device based these bidirectional losses.

Ward uses a pathloss comparison to determine whether to handoff a mobile station from a serving base station to a target base station. *See* Ward, col. 9, l. 1-27. To accomplish this, Ward compares the difference in downlink pathloss between the serving cell and the mobile terminal and the target cell and mobile terminal and compares the difference in uplink pathloss between the serving cell and the mobile terminal and the candidate cell and the mobile terminal. Ward thus compares pathloss in the same direction, *e.g.* downlink or uplink. *See* Ward, equations 1 and 2; col. 7, ll. 38-49.

In contrast to the express limitations in the independent claims, Ward does not calculate and compare a bidirectional propagation loss. In fact, Ward assumes that there are *no differences* in downlink and uplink pathloss in order to perform its consistency check and ultimately hand off a mobile station from a serving station to a target station. *See* Ward, col. 7, ll. 51-51; col. 9, ll. 9-12 (“the difference between downlink and uplink pathloss should be the same for the path between the mobile station and the serving base station on one side and the mobile station and the target base station on the other side”).

Moreover, Ward completely fails to disclose comparing “whether a propagation loss of the propagation path to said main apparatus is smaller than a propagation loss of a propagation path to said communication terminal” in identifying whether the failed devices is the communication terminal or the main apparatus, as recited in the present invention. The Office Action admits that “Ward does not explicitly indicate that the pathloss differences indicate a failure in the transmitter/receiver.” *See* Office Action at p. 7. The Office Action then relies on Western to teach this feature.

Western discloses a method for determining a transmit power of a base station in a cellular communication system in a handover situation. Western calculates a difference that “represents the transmit power of the target cell 28, and thus the internal path loss between a base station transmitter and an antenna associated with the target cell.” *See* Western at col. 3, ll. 41-45. What is determined is a difference between the actual handoff power level and the desired handoff power level between the target and base cells.

Unlike the independent claims of the present application, Western does not disclose calculating a bidirectional propagation loss. Western does not calculate the pathloss difference in the following opposite directions: (1) from the main apparatus to the communication terminal (the first signal) or (2) from a communication terminal to a main apparatus (the second signal), as recited in the independent claims. In addition, Western does not determine whether it is the first or second signal that has a greater propagation loss in order to identify the failed device. Therefore, Applicant respectfully submits that claims 1, 9, and 11 are allowable over Ward and Western.

Claims 2, 4, 7, 9, 10, and 15 depend directly from, and contain all the limitations of claims 1, 9, and 14. These dependent claims recite additional limitations, which, in combination with the limitations of claim 1, 9, and 14 are neither disclosed nor suggested by Ward or Western and are also directed towards patentable subject matter. Thus, claims 2, 4, 7, 9, 10, and 15 should also be allowed.

Claim 3 has been rejected under § 103(a) over Ward in view of Western and further in view of Ikeda. Claim 6 has been rejected under § 103(a) over Ward in view of Western and further in view of Boesinger. Claim 8 has been rejected under § 103(a) over Ward in view of Western and further in view of Iwasaki. Claims 5, 12, and 13 have been rejected under § 103(a) over Ward in view of Western and Ikeda and further in view of Boesinger. Claims 11 and 16 have been rejected under § 103(a) over Ward in view of O'Reilly. Applicant respectfully traverses these rejections.

As discussed above, Ward and Western fail to disclose calculating and comparing bidirectional propagation losses to identify a failed transmitter or receiver. The secondary references cited above were not included to cure this deficiency, but to allegedly disclose additional features in Applicant's claims. Even if Ward and Western are combined with any of the cited secondary references, however, they do not disclose the claimed limitations relating to bidirectional propagation losses. Therefore, Applicant's independent claims 1, 9, and 14 and their dependents, including claims 2-8, 10-13, 15, and 16 are allowable. Accordingly, it is respectfully requested that this rejection be withdrawn.

Applicants have responded to all of the rejections recited in the Office Action. Reconsideration and Notice of Allowance for all of the pending claims is therefore respectfully requested.

Dated: December 10, 2007

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